Summary of Responses to EPA State DOT Municipal Separate Storm Sewer Systems (MS4s) Questionnaire

The Office of Management and Budget (OMB) approved three questionnaire instruments (also called information collection requests or ICRs) designed to collect information from regulated MS4s, non-regulated MS4s, and transportation MS4s. The purpose of these ICRs was to collect information to help EPA assess whether it should revise its existing stormwater requirements, and if so, how and to what extent it should revise these requirements. More specifically, the purpose was to collect baseline information to inform EPA's analyses of a possible stormwater rulemaking proposal.

EPA used the information collected in the ICRs to characterize current stormwater practices and requirements, environmental impacts of stormwater discharges, costs associated with controlling and regulating stormwater discharges, and the financial capability of those that could be subject to revisions to the federal stormwater requirements.

In August 2010, EPA sent selected recipients a letter which notified them of their selection and provided a link to an electronic version of the questionnaire. Recipients had 60 days from receipt of the letter to complete and return the questionnaire. EPA distributed the MS4 questionnaires to a statistically-sampled subset of these facilities, sending it to 608 regulated MS4s, 84 regulated Department of Transportation MS4s and 932 federally non-regulated MS4s.
EPA received responses from 471 regulated MS4s, 76 regulated Department of Transportation MS4s, and 294 federally non-regulated MS4s.

This summary is based on the March 25, 2011, delivery of the Transportation MS4 ICR database of responses with 63 state DOT agency respondents from 46 states and the District of Columbia. Eight states (AK, FL, MD, MN, MT, NM, TX, and WY) had more than one state DOT regional office reply to the survey. This summary does not include responses from county-level DOTs.

Contents

Section A: Technical Information (Questions A-1 to A-11)

Questions A-1 and A-2 requested background information about those who responded to the survey, including Name and Title, Agency, Address, Phone Number, Email Address, Best Time to Contact, and MS4 Owner and Operator Department/Agency. The following is a summary by state of the number of TS4s that responded to the survey.

State/District	Number of Respondents	State/District	Number of Respondents	State/District	Number of Respondents
Alabama	1	Kentucky	1	North Dakota	1
Alaska	2	Louisiana	1	Ohio	1
Arizona	1	Maine	1	Oklahoma	1
Arkansas	1	Maryland	2	Oregon	1
California	1	Massachusetts	1	Pennsylvania	1
Colorado	1	Michigan	1	Rhode Island	1
Connecticut	0	Minnesota	2	South Carolina	1
Delaware	1	Mississippi	1	South Dakota	1
Dist. of Columbia	1	Missouri	1	Tennessee	1
Florida	4	Montana	4	Texas	6
Georgia	0	Nebraska	1	Utah	1
Hawaii	0	Nevada	1	Vermont	1
Idaho	1	New Hampshire	1	Virginia	1
Illinois	1	New Jersey	1	Washington	1
Indiana	1	New Mexico	3	West Virginia	1
Iowa	0	New York	1	Wisconsin	0
Kansas	1	North Carolina	1	Wyoming	2

Question A-3. Which of the following roads does the DOT own, operate, and/or maintain? (Checking the box indicates that you do own, operate, and/or maintain the roads in that category. Check all that apply.)

Types of Roads	Owned	Operate	Maintain
All roads that are in the state	1 (2%)	1 (1%)	2 (3%)
State level highways/interstates/expressways/principal arterials	60 (92%)	60 (92%)	59 (91%)
County level roads/minor arterials	14 (25%)	18 (28%)	18 (31%)
Municipal/local roads/collectors	12 (19%)	14 (22%)	14 (23%)
Private roads	2 (3%)	2 (3%)	2 (3%)
Other	6 (11%)	6 (11%)	7 (11%)

Question A-4. Which example best describes your agency's administrative approach to stormwater management under the MS4 permit(s)?

Response	Number of Respondents
Headquarters has sole responsibility	10 (17%)
Headquarters and Regional/Divisional offices share responsibility	40 (62%)
Regional/Divisional offices share responsibility	5 (8%)

Response	Number of Respondents
Other	8 (14%)

Question A-5. How Many MS4 permits is your DOT subject to?

Number of Permits	Number of Respondents
1 permit	35 (56%)
2 permits	7 (11%)
3 permits	4 (6%)
More than 3 permits	17 (26%)

Question A-6. Which best describes your MS4 permit?

Type of Permit	Response
Individual	
Large/Medium MS4 permit (Phase I)	22 (34%)
Small MS4 permit (Phase II)	18 (29%)
General	
Large/Medium MS4 permit (Phase I) that is not written specifically for transportation (i.e. it's a traditional MS4 permit)	4 (6%)
Large/Medium MS4 permit (Phase I) that is written specifically for transportation	2 (2%)
Small MS4 permit (Phase II) that is not written specifically for transportation (i.e. it's a traditional MS4 permit)	38 (58%)

Question A-7. What is the permit number of the permit under which your agency does the most activities?
Responses not included in this summary.
Question A-8. Which of the following best describe(s) the basis for how stormwater discharges from your MS4 are permitted? (Check all that apply.)

Basis for MS4 Permits	Number of Respondents
Based on the urbanized area boundary (as defined by the U.S. Census)	45 (71%)
All roads in the state (includes those roads inside and outside of the urbanized area)	4 (6%)
All county roads (includes those roads inside and outside of the urbanized area)	4 (6%)
All local roads (includes those roads inside and outside of the urbanized area)	0
Based on sewer, irrigation, drainage, flood control district	2 (3%)
Based on watershed boundaries	3 (5%)
Based on watershed districts (or other watershed entity)	0
Other, Specify	20 (31%)

Question A-9. How many permit terms have you completed under the stormwater program?

Number of Permits	Number of Respondents
None, we have not yet completed our first permit term	16 (25%)
1 permit term – we are currently covered under our second MS4 permit	34 (52%)
2 permit terms – we are currently covered under our third MS4 permit	10 (15%)

Number of Permits	Number of Respondents
3 permit terms – we are currently covered under our forth MS4 permit	0
4 or more permit terms – we are currently covered under our fifth or more permit	2 (3%)
No Answer	1 (2%)

Of the 63 respondents, 20 indicated that one or more of their permit(s) have been administratively extended for periods ranging from 5 months to 58 months (4 years, 10 months).

Question A-10. Does your MS4 permit specify different requirements for linear and non-linear transportation facilities?

Response	Number of Respondents
Yes	15 (23%)
No	48 (76%)

Question A-11. Which of the following locations are covered under your MS4 permit(s)?

Covered Locations	Number of Respondents
Maintenance yards	58 (91%)
Rest Stops	33 (51%)
Roadways, including shoulders	63 (100%)
Administrative Buildings	38 (60%)

Extent of Coverage (Questions A-12 to A-18)

Question A-12. For State DOTs, do you have a GIS layer that shows the extent of the transportation network under your control? If you are not a state DOT, answer "N/A".

Response	Number of Respondents
Yes	51 (81%)
No	10 (16%)
Not applicable	2 (3%)

Question A-13. Do you have a GIS layer that shows the area covered by your MS4 permit (or permits, if you are subject to multiple permits)?

Response	Number of Respondents
Yes, a GIS layer is available for the entire area subject to MS4 permitting	42 (68%)
Yes, a GIS layer is available for part of the area subject to MS4 permitting	7 (11%)
No	14 (22%)

Question A-14. Which of the following stormwater management activities do you conduct within the area subject to your MS4 permit(s)?

Response	Number of Respondents
Public education and outreach	61 (95%)
Public participation/involvement	55 (86%)
Illicit discharge detection and elimination	61 (95%)
Pollution prevention/good housekeeping (includes street sweeping)	63 (100%)
Record keeping	62 (98%)
Erosion and sediment controls for construction activities	63 (100%)
Post Construction stormwater management for new development and redevelopment	57 (89%)
Industrial stormwater inspections	22 (34%)
Stormwater monitoring	40 (65%)
Other categories of stormwater management activities, Specify:	12 (18%)

Question A-15. Do you conduct stormwater management activities outside of the area covered by your MS4 permit(s)?

Response	Number of Respondents
Yes	50 (80%)
No	9 (14%)
Not applicable	4 (6%)

Question A-16. Do you conduct any of the following stormwater management activities outside of the area subject to your MS4 permit(s)?

Response	Number of Respondents
Public education and outreach	38 (60%)
Public participation/involvement	36 (57%)
Illicit discharge detection and elimination	28 (45%)
Pollution prevention/good housekeeping (includes street sweeping)	47 (75%)
Record keeping	38 (62%)
Erosion and sediment controls for construction activities	46 (72%)
Post Construction stormwater management for new development and redevelopment	40 (63%)
Industrial stormwater inspections	12 (18%)
Stormwater monitoring	17 (29%)
Other categories of stormwater management activities, Specify:	11 (17%)

Question A-17. Do you allow any entities to reside in your right of way/area under your control where you apply the components of your stormwater program?

Response	Number of Respondents
Yes, utilities supporting roadway construction	3 (5%)
Yes, utilities such as pipes and power lines	32 (51%)
Yes, private developers such as cell phone towers, etc.	0
Yes, other categories of entities, please specify:	26 (41%)
We do not allow any entities to reside within our right of way or area under control of the DOT	2 (3%)

Response	Number of Respondents
Unknown	0

Question A-18. Do you oversee any stormwater requirements for those entities you allow to reside in your right of way/area under your control?

Response	Number of Respondents
Yes	33 (52%)
No	26 (42%)
Unknown	2 (3%)

Specific Stormwater Program (Questions A-19 to A-32)

Question A-19. Do you have data or other information collected by you or collected on your behalf that show the effectiveness of any of the following components of your stormwater program to protect waterbodies from stormwater impacts? (This data could be part of annual reports, studies, and other documents/reports. Check all that apply.)

Response	Number of Respondents
Public education and outreach	22 (35%)
Public participation/involvement	18 (29%)
Illicit discharge detection and elimination	22 (35%)
Construction site discharge control (including erosion/sediment control)	27 (43%)
Post construction discharge control (including detention, retention and treatment) practices	21 (32%)
Pollution prevention/good housekeeping (including street sweeping)	27 (43%)
Industrial inspections	5 (8%)
Wet weather outfall monitoring	12 (18%)
Monitoring to measure the performance of specific stormwater controls	16 (25%)
Instream monitoring	8 (12%)
Implementation of watershed management plans	6 (9%)
MS4 training programs	15 (23%)
Source control (limits on fertilizer or pesticides)	13 (20%)
Other	6 (9%)
None	20 (32%)

Question A-20. Do you have data or other information collected by you or collected on your behalf that show the ineffectiveness of any of the following components of your stormwater program to protect waterbodies from stormwater impacts?

Response	Number of Respondents
Public education and outreach	4 (6%)
Public participation/involvement	3 (5%)
Illicit discharge detection and elimination	2 (3%)
Construction site discharge control (including erosion/sediment control)	6 (9%)

Response	Number of Respondents
Post construction discharge control (including detention, retention and treatment) practices	4 (6%)
Pollution prevention/good housekeeping (including street sweeping)	1 (2%)
Industrial inspections	1 (2%)
Wet weather outfall monitoring	4 (6%)
Monitoring to measure the performance of specific stormwater controls	4 (6%)
Instream monitoring	0
Implementation of watershed management plans	1 (2%)
MS4 training programs	2 (3%)
Source control (limits on fertilizer or pesticides)	2 (3%)
Other	5 (8%)
None	45 (71%)

a. Program areas shown to be ineffective included monitoring (1) and dry weather field screening/outfall sampling (4).

Question A-21. What parts of your stormwater management program are carried out by other departments in your organization, other transportation divisions, or other governmental agencies (for example some departments of transportation may combine their efforts for public education with a city)?

Response	Number of Respondents
Public education and outreach	41 (63%)
Public participation/involvement	37 (57%)
Illicit discharge detection and elimination	33 (51%)
Pollution prevention/good housekeeping (including street sweeping)	35 (54%)
Construction stormwater program	37 (57%)
Post construction discharge control (including detention, retention and treatment) practices	31 (48%)
Record-keeping/annual reports	29 (45%)
Other, please specify	12 (18%)
None	8 (16%)

Question A-22. Does your agency have oversight over those departments or governmental agency's stormwater management activities referenced in Question A-21?

Response	Number of Respondents
Yes	19 (29%)
No	16 (25%)
Not applicable	10 (16%)
Not all activities	18 (28%)

Question A-23. For those parts of your stormwater program that are performed by other departments in your organization, other transportation divisions, governmental agencies, or contractors, do you include any specific stormwater requirements in your contracts or other binding agreements for the following activities? (These stormwater requirements are specific requirements that are associated with an activity. Check all that apply.)

Response	Yes	N/A
Designing stormwater controls	45 (69%)	16 (25%)
Constructing stormwater controls	51 (78%)	12 (29%)
Maintaining stormwater controls	46 (71%)	14 (22%)
Inspecting construction stormwater controls	47 (72%)	13 (20%)
Inspecting post-construction stormwater controls	32 (49%)	20 (32%)
Other, Specify:	16 (25%)	

Question A-24. Which of the following activities have been part of the public education and outreach component of your stormwater program from 2005 - 2009? Check all that apply.

Response	Number of Respondents
Brochures, fact sheets, guides, or similar documents for the general public	49 (77%)
Brochures, fact sheets, guides, or similar documents for your agency's staff	42 (66%)
Radio features	18 (28%)
Television advertisements	15 (28%)
Newspaper advertisements	14 (22%)
Educational programs (for the general public, school children, teachers, etc.)	32 (49%)
Event participation (conference participation, earth day events, fairs, etc.)	47 (74%)
Staff training	60 (94%)
Contractor/consultant training	46 (72%)
Municipality training	22 (34%)
Storm drain stenciling	22 (34%)
Stormwater hotlines	14 (22%)
Tributary signage	13 (20%)
Website	49 (77%)
Informational briefings for public officials (politicians, managers, etc.)	26 (42%)
Volunteer educators/speakers	27 (43%)
Other, describe:	11 (17%)
None	1 (2%)

Question A-25. Which of the following activities have been part of the public involvement component of your stormwater program from 2005 - 2009? (Check all that apply.)

Response	Number of Respondents
Public meetings/citizen panels	34 (54%)
Public notification and review of stormwater program elements	27 (42%)
Volunteer water quality monitoring	4 (6%)
Storm drain stenciling	18 (28%)
Public reporting of litter/pollution (telephone hotline or website)	41 (65%)
Stream clean-ups	14 (22%)
Citizen watch groups	4 (6%)
Coordination with highway patrol (or similar entity) and/or governmental entities regarding stormwater complaints	28 (45%)
"Adopt A Highway" programs	55 (85%)
Other, describe:	11 (17%)
None	1 (2%)

Question A-26. Which of the following activities have been part of the illicit discharge detection and elimination component of your stormwater program from 2005 - 2009? (Check all that apply.)

Response	Number of Respondents
Paper tracking/inventory of outfalls	36 (55%)
Database tracking/inventory of outfalls	40 (62%)
Outfalls that drain to sensitive watersheds are tracked/inventoried differently	7 (11%)
Storm drain system mapping	36 (57%)
Field staff training	45 (71%)
Field analysis/indicator tracing/lab analysis	21 (32%)
Priority area identification	17 (26%)
Public reporting	34 (52%)
Adoption of local ordinances/codes/policies established by local jurisdictions	4 (6%)
Other, please describe:	13 (20%)
None	3 (6%)

Question A-27. Which of the following activities have been part of the pollution prevention/good housekeeping component of your stormwater program from 2005 - 2009? Check all that apply.

Response	Number of Respondents
Inventory of your facilities	56 (89%)
Facility assessment (to determine the facility's potential to discharge pollutants)	45 (71%)
Vehicle washing requirements	47 (74%)
Fueling operations requirements	45 (71%)
Vehicle maintenance requirements	49 (78%)
De-icing/Anti-icing material storage	54 (86%)
Tracking the amount of de-icing/anti-icing materials used	43 (68%)
Tracking the amount of fertilizers used	22 (34%)
Tracking the amount of pesticides used	24 (38%)
Tracking the amount of herbicides used	38 (60%)
Facility inspections	56 (88%)
Storm sewer system maintenance activities (includes inspections and cleaning)	51 (80%)
Street sweeping/vacuuming activities	54 (86%)
Pesticide/herbicide application and management requirements	49 (78%)
Fertilizer application and management requirements	33 (52%)
Field staff training	54 (86%)
Contractor/consultant training	34 (54%)
Other, describe	13 (21%)
None	1 (2%)

Question A-28. Which of the following activities has been part of the record keeping component of your stormwater program from 2005 - 2009? Check all that apply.

Response	Number of Respondents
Spill response	44 (69%)
Construction inspection	55 (86%)

Response	Number of Respondents
Industrial inspection	13 (20%)
Illicit discharge detection and elimination	53 (83%)
Annual reporting costs	21 (34%)
Permit implementation costs	14 (22%)
Outfall inspection	41 (65%)
Inspection of specific stormwater controls	44 (68%)
Staff training	58 (89%)
Other, please describe:	6 (9%)
None	1 (2%)

Question A-29. What mechanisms other than ordinances do you use to implement your stormwater program and ensure compliance?

Response	Number of Respondents
Advanced Internal policies/guidelines	61 (94%)
Cooperative agreements	44 (68%)
Third party construction contracts contain stormwater requirements	50 (77%)
Third party contracts related to operating and/or maintaining stormwater control measures contain stormwater requirements	18 (28%)
Other, Specify:	12 (23%)

Question A-30. Which of the following activities have been part of the industrial component of your stormwater program from 2005 - 2009? Check all that apply.

Response	Number of Respondents
Inventory of industrial facilities (i.e. a list of the facilities themselves	18 (28%)
Education of industrial operators about stormwater requirements and/or controls	13 (20%)
Site inspection of industrial facilities for stormwater	17 (26%)
Site inspection of commercial facilities for stormwater	3 (5%)
Training of inspectors	11 (17%)
Other, specify:	10 (15%)
None, there is no industrial component in the MS4 stormwater program	36 (57%)

Question A-31. Which of the following activities have been part of the construction component of your stormwater program from 2005 - 2009? Check all that apply.

Response	Number of Respondents
Review site plans	53 (83%)
Tracking/ inventory of construction sites	50 (77%)
Construction site inspections	60 (94%)
Approved construction control manual	47 (74%)
Field staff training	55 (85%)
Contractor training	47 (72%)
Other, describe:	12 (18%)
None, there is no construction component in the MS4 stormwater program	2 (3%)

Question A-32. Does your agency have GIS data for ongoing and future transportation projects?

Response	Number of Respondents
Yes	42 (66%)
No	14 (23%)
Unknown	6 (9%)

Post Construction (Questions A-33 to A-48)

Question A-33. Which of the following activities have been part of the post construction component of your stormwater program from 2005 - 2009? (Check all that apply.)

Response	Number of Respondents
Review site plans for post construction stormwater water quality and/or water quantity requirements for the DOT's discharges from new construction projects.	46 (72%)
Review site plans for post construction stormwater water quality and/or water quantity requirements for discharges from new construction projects on adjacent properties that discharge into the DOT's MS4	28 (43%)
Tracking/inventory of sites with post-construction controls	20 (31%)
Tracking/inventory of post-construction stormwater controls	30 (46%)
Inspections related to post-construction controls	47 (75%)
Field staff training	34 (54%)
Contractor training	14 (22%)
Inspection and maintenance of post-construction stormwater controls	51 (80%)
Other, specify:	9 (14%)
None	4 (6%)

Question A-34. What mechanism(s) does the DOT use to ensure that continued operation and maintenance of post construction stormwater controls is performed?

Response	Number of Respondents
Tracking database of post construction stormwater controls	17 (26%)
Standardized prioritization of activities based on the severity of operation and maintenance required	17 (26%)
Standardized schedule for conducting inspections of post construction stormwater controls	35 (54%)
None, the DOT is not responsible for the operation and maintenance of post construction stormwater controls	4 (6%)
Other, specify:	24 (38%)

Question A-35. Who typically reviews your site plans for stormwater post-construction control structures? Includes reviews for both water quality and quantity concerns. (Check all that apply.)

Response	Number of Respondents
State regulatory agency	34 (52%)
County	11 (18%)
Municipality	14 (22%)
EPA	2 (3%)
Self-review	61 (97%)
Third-party contractor/entity	14 (23%)
Other, specify:	5 (8%)

Question A-36. Do you have any stormwater controls located on the following types of property?

Type of Facility	Shared Control	DOT-Owned Control	Other
Privately owned properties	8 (12%)	7 (9%)	2 (7%)
Federal properties	12 (16%)	6 (8%)	2 (3%)
State properties not owned by the DOT	13 (18%)	9 (12%)	1 (1%)
County properties not owned by the DOT	16 (22%)	2 (4%)	1 (3%)
Local properties not owned by the DOT	14 (19%)	3 (4%)	3 (5%)
Not applicable	32[a] (50%)		

a. Of respondents who answered "N/A" and provided further information, 10 said there were no such facilities, 18 indicated that the stormwater controls were located in the right-of-way or on DOT-owned or managed properties, one responded that their post-construction was just beginning, and another indicated that the full inventory of facilities had not been completed but that it is assumed that there will be shared-control facilities. One DOT indicated that they install stormwater controls but turn O&M over to cities by agreement; in rural areas, facility O&M is conducted by DOT.

Question A-37. Which of the following activities are considered by the DOT to be new development, redevelopment, or maintenance/repair?

Type of Activity	New Development	Redevelopment	Maintenance
Bridge Deck Replacement	1 (2%)	18 (28%)	44 (71%)
Bridge Deck Repair	6 (9%)	23 (35%)	34 (55%)
Extensions/expansions that add imperviousness onto previously undeveloped land, but are part of the same plot/parcel	25 (40%)	34 (52%)	3 (5%)
Road and/or shoulder widening projects (e.g. adding a lane or widening an older roadway to improve safety)	15 (23%)	44 (69%)	3 (6%)
Reconstruction projects	12 (20%)	44 (68%)	5 (9%)
Pavement structural and joint repair	0	1 (2%)	62 (87%)
Realignment (moving the location of an existing highway, curve corrections, intersection realignment, etc.)	29 (48%)	32 (49%)	0
Addition of new sidewalks or bike paths	39 (63%)	20 (31%)	2 (3%)
Road resurfacings	0	6 (9%)	57 (91%)
Road repaving	1 (2%)	9 (14%)	53 (85%)
Sidewalk replacement	2 (3%)	11 (17%)	50 (80%)
Culvert replacement and repair	1 (2%)	16 (25%)	45 (72%)
Removal or protection of roadside objects which pose a safety hazard to the traveling public	0	0	0
Other, specify:	1 (2%)	9 (14%)	51 (82%)

Question A-38. In areas subject to MS4 permits indicate if post construction stormwater management requirements are typically applied to the following activities:

Activity	Post-construction SW Standards for Drainage Typically Apply	Post-construction SW Standards for Water Quality Typically Apply	Post-construction SW Standards Typically Do Not Apply	Varies Based on the Nature of the Project	The DOT Does Not Typically Conduct This Activity
Road and/or shoulder widening	42 (65%)	35 (54%)	9 (15%)	11 (18%)	1 (2%)
Adding a lane to an existing road or highway	46 (74%)	37 (58%)	3 (5%)	14 (22%)	1 (2%)
Construction of a roadway bypass or a new road or highway where one does not currently exist	54 (83%)	43 (66%)	2 (3%)	5 (8%)	1 (2%)
Road reconstruction	43 (68%)	32 (51%)	5 (9%)	17 (26%)	0
Realignment	51 (80%)	37 (58%)	3 (5%)	12 (18%)	1 (2%)
Construction of new sidewalks, bike paths or other pedestrian facility	31 (48%)	25 (38%)	12 (18%)	17 (28%)	1 (3%)
Construction or expansion of a parking lot	30 (46%)	24 (37%)	2 (3%)	15 (23%)	18 (31%)
Construction of a maintenance facility	43 (68%)	35 (54%)	2 (3%)	12 (18%)	7 (12%)
Construction of a rest stop	42 (65%)	31 (48%)	3 (5%)	11 (17%)	9 (14%)

Question A-39. In areas NOT subject to MS4 permits, indicate if the DOT typically applies post construction stormwater management requirements to the following activities:

Activity	Post-construction SW Standards for Drainage Typically Apply	Post-construction SW Standards for Water Quality Typically Apply	Post-construction SW Standards Typically Do Not Apply	Varies Based on the Nature of the Project	The DOT Does Not Typically Conduct This Activity
Road and/or shoulder widening	36 (55%)	26 (40%)	9 (15%)	12 (20%)	10 (15%)
Adding a lane to an existing road or highway	38 (62%)	29 (46%)	7 (11%)	9 (14%)	11 (17%)
Construction of a roadway bypass or a new road or highway where one does not currently exist	44 (68%)	32 (49%)	2 (3%)	7 (11%)	10 (18%)
Road reconstruction	35 (55%)	24 (38%)	4 (8%)	16 (25%)	10 (15%)
Realignment	42 (66%)	30 (48%)	3 (5%)	9 (17%)	9 (15%)
Construction of new sidewalks, bike paths or other pedestrian facility	25 (38%)	18 (29%)	12 (18%)	14 (23%)	11 (18%)
Construction or expansion of a parking lot	25 (38%)	14 (20%)	2 (3%)	18 (28%)	24 (40%)
Construction of a maintenance facility	36 (57%)	29 (45%)	1 (2%)	14 (22%)	12 (20%)
Construction of a rest stop	34 (52%)	21 (32%)	3 (5%)	17 (26%)	14 (25%)

Question A-40. How do you ensure that post construction standards or design criteria are met?

Procedure	Number of Respondents

Procedure	Number of Respondents
Site inspection to ensure designs for post construction are followed	56 (89%)
Operation & maintenance inspection of post construction stormwater controls to ensure controls are working as designed	50 (78%)
Site plan review/approval acceptance	48 (77%)
Review self-reporting/self-certification database	15 (23%)
Other	5 (8%)

Question A-41. Do you participate in an alternative program to comply with your performance standard or design standard?

Response	Number of Respondents
Yes, it is a stormwater off-site mitigation program, specify:	3[a.] (5%)
Yes, it is a payment in lieu program, specify:	0
Yes, it is a stormwater crediting program, specify:	0
Yes, it is a mitigation banking system, specify:	4[b.] (6%)
Yes, there is another type of alternative compliance program, specify:	5[c.] (8%)
No, I do not participate in any alternative compliance programs, but they do exist	5 (8%)
No, an alternative compliance program does not exist	46 (73%)

Question A-42. Who determined your MS4's stormwater performance standards and/or design criteria requirements for post construction controls for new or redevelopment activities?

Entity	Number of Respondents
The state enacted these requirements that are implemented through the MS4 permit	28 (45%)
The state enacted these requirements that are implemented through a state construction stormwater permit	28 (43%)
The County enacted these regulations that the MS4 is required to implement	1 (2%)
Local governments enacted these requirements	9 (14%)
The DOT has self-imposed requirements	36 (57%)
Other, describe:	16 (25%)

Question A-43. Is your post construction standard for redevelopment projects different than for new development projects?

Response	Number of Respondents
Yes	7 (12%)
No	56 (88%)

Question A-44. For new development projects, do you have different post construction stormwater performance standards and/or design criteria that apply in different locations within your service area?

Response	Number of Respondents
No, a single standard applies to all DOT's post-construction activities. Specify if it's an internal standard or if the state determined the standard.	40[a.] (65%)

Response	Number of Respondents
Yes, multiple standards/criteria which vary depending on the municipal government.	3 (5%)
Yes, multiple standards/criteria which vary depending on the county government.	1 (2%)
Yes, multiple standards/criteria which vary depending on the geographic location.	15 (23%)
Yes, multiple standards/criteria which vary by location depending on whether it is for treatment of stormwater or attenuation of stormwater discharge volume/flow.	4 (6%)

Question A-45. Does your DOT have a statewide standard (for state DOTs) or countywide standard (for county DOTs), for stormwater management for new development?

Response	Number of Respondents
Yes, there is a standard for water quality	28 (45%)
Yes, there is a standard quantity	37 (58%)
Yes, there is a standard for retention	17 (26%)

Question A-46. For redevelopment projects in your MS4, what is the threshold to which post construction stormwater performance standards and/or design criteria apply?

Response	Number of Respondents
No, a single standard applies to all the DOT's post-construction activities. Specify if it is an internal standard or if the State determined the standard:	32 (52%)
Yes, multiple standards/criteria which vary depending on the municipal government	0 (0%)
Yes, multiple standards/criteria which vary depending on the county government	1 (2%)
Yes, multiple standards/criteria which vary depending on the geographic location	6 (9%)
Yes, multiple standards/criteria which vary by location depending on whether it is for treatment of stormwater or attenuation of stormwater discharge volume/flow	6 (9%)

Question A-47. Does your DOT have a statewide standard (for state DOTs) or countywide standard (for county DOTs), for stormwater management for redevelopment?

Response	Number of Respondents
Yes, there is a standard for redevelopment that is the same as the standard for new development	20 (31%)
Yes, there is a standard for water quality	7 (11%)
Yes, there is a standard for water quantity	7 (11%)
Yes, there is a standard for retention	4 (6%)
No	12 (20%)

Retrofits (Questions A-49 to A-55)

Question A-49. Does your DOT have a stormwater retrofit program?

Response	Number of Respondents

Response	Number of Respondents
Yes, we have a stand along retrofit program specifically for stormwater.	8 (12%)
Yes, we have a retrofit program that is part of some larger program or in combination with other environmental programs.	12 (18%)
No.	41 (66%)

Question A-50. Which of the following statements best describes your stormwater retrofit program?

Response	Number of Respondents
We are required to retrofit.	12 (19%)
We have a voluntary retrofit program.	13 (21%)
We receive incentives for retrofits.	3 (5%)
We initiate retrofits on public property.	7 (11%)
We initiate retrofits on private property.	0
Stream restoration is part of our retrofit plan.	4 (6%)
Other, please specify:	5 (8%)

Question A-51. How does the DOT pay for the stormwater retrofit projects?

Response	Number of Respondents
State Transportation Improvement Program (STIP)	11 (17%)
We have a dedicated fund.	5 (8%)
Other, specify:	16 (25%)
None	0

Question A-52. What is the purpose of your stormwater retrofit program (Check all that apply)?

Response	Number of Respondents
To comply with stormwater permit requirements	12 (18%)
To address flood control	10 (15%)
To comply with TMDL or other water quality requirements	10 (15%)
Other requirements, such as state requirements, please describe:	5 (8%)
Not to meet a requirement but to address watershed plan or local water quality, habitat, or stream stability or geomorphology concerns	3 (5%)
Other, specify:	8 (12%)
Not applicable	1 (2%)

Question A-53. Does your retrofit program apply to all areas under your control, or only in areas subject to MS4 permitting?

Response	Number of Respondents
Yes	15 (24%)
No	12 (19%)
No Answer	36 (57%)

Specific Stormwater Controls (Questions A-56 to A-69)

Question A-56. What process do you have for determining which stormwater controls are eligible/approved for use on any of your projects? (Check all that apply.)

Response	Number of Respondents
We have a stormwater control testing program	3 (5%)
We consult with the permitting authority for an approved list of stormwater controls	21 (32%)
The state has a testing program that we reference	4 (6%)
We have a process that is part of our retrofit program	4 (6%)
We do not have a formal process for approving particular stormwater controls for use on our projects	12 (20%)
We have specific design standards that we created and follow	37 (60%)
Other, Specify:	21 (34%)

Question A-57. (a) Which of the following stormwater controls are installed within your MS4 (includes those controls located on both public and private property)?
(b) Which stormwater controls is the MS4 responsible for maintaining (at any level of service)?
(c) For which practices do you have available cost information, including both capital cost and operation and maintenance cost?
(d) For which stormwater controls do you have performance data that you have collected or that have been collected on your system?
(Note: An EPA representative may contact you at a later date in order to get more detailed information about this cost and performance data. If you have additional comments on the utility of any of these practices you may include it at the end of this section.)

Stormwater Controls	(a) Installed/ Applied	(b) Maintain	(c) Available Cost Information	(d) Performance Data
Extended Detention Basin (wet or dry)	44 (69%)	42 (66%)	9 (14%)	4 (6%)
Catch basin insert	22 (37%)	20 (32%)	7 (11%)	5 (8%)
Underground detention	17 (26%)	14 (22%)	4 (6%)	0 (0%)
Underground infiltration	14 (23%)	14 (22%)	2 (3%)	1 (2%)
Infiltration trench	22 (37%)	22 (37%)	5 (8%)	2 (3%)
Dry well	12 (20%)	10 (15%)	0 (0%)	0 (0%)
Sand or other media filters	17 (26%)	15 (23%)	7 (11%)	6 (9%)
Oil/water separators	35 (57%)	34 (54%)	6 (9%)	1 (2%)
Vegetated swale	48 (75%)	48 (75%)	9 (14%)	6 (9%)
Constructed Wetland (including basins, channels, or gravel)	24 (37%)	24 (37%)	7 (11%)	3 (5%)
Vegetated filter strip	36 (55%)	35 (54%)	8 (12%)	4 (6%)
Bioretention (includes rain gardens, sidewalk	22 (34%)	19 (29%)	6 (9%)	5 (8%)

Stormwater Controls	(a) Installed/ Applied	(b) Maintain	(c) Available Cost Information	(d) Performance Data
planters, curb extensions and other plant or soil systems designed to infiltrate or evapotranspirate stormwater)				
Trees/Tree Box	16 (25%)	11 (17%)	1 (2%)	0 (0%)
Green Roof/Ecoroof	1 (2%)	1 (2%)	1 (2%)	0 (0%)
Riparian Buffers	21 (32%)	18 (28%)	1 (2%)	1 (2%)
Permeable concrete/permeable asphalt/ permeable pavers	16 (25%)	12 (18%)	4 (6%)	1 (2%)
Cistern	1 (2%)	1 (2%)	1 (2%)	0 (0%)
Rain barrel	3 (5%)	1 (2%)	0 (0%)	0 (0%)
Native vegetation/landscaping planting requirements	31 (48%)	29 (45%)	5 (8%)	1 (2%)
Xeriscaping or water efficient planting designs	12 (18%)	10 (15%)	4 (6%)	1 (2%)
Conservation/protection of green open space	17 (26%)	15 (23%)	2 (3%)	0 (0%)
Reduced impervious surface	11 (18%)	8 (14%)	1 (2%)	0 (0%)
Open graded friction course	13 (20%)	12 (18%)	4 (6%)	3 (5%)
Other[a]	8 (12%)	7 (11%)	2 (3%)	1 (2%)
Other[b]	3 (5%)	3 (5%)	1 (2%)	0 (0%)

a. "Other" responses were described as level spreader; water quality str (sic); wet pond; rip-rap; sediment forebays, outlet sediment traps, recharge basins, and water quality inlets; water quality catch basin; and lined drainages.
b. "Other" responses were described as preformed scour hole, sediment trap, and dry pond.

Question A-58. For any construction projects that you have initiated within the past 5 years have you completed a cost comparison between traditional stormwater practices (such as stormwater ponds) and practices that retain stormwater on-site (also known as low impact development or green infrastructure)?

Response	Number of Respondents
Yes	4 (6%)
No	59 (94%)

If so, is the cost data available? (Includes costs that you collected yourself or were collected on your behalf)

Response	Number of Respondents
Yes	4 (6%)
No	10 (15%)

Question A-59. What were the drivers for implementation of the low impact development or green infrastructure practices? (Check all that apply.)

Response	Number of Respondents
Stormwater management requirement	15 (23%)

Response	Number of Respondents
To address flooding	3 (5%)
TMDL or other water quality requirement	5 (8%)
Other:	14 (23%)
Unknown Not Applicable	37 (58%)

Question A-60. In your service area, which of the following ordinances or other types of regulations, policies, or guidelines may prevent stormwater retention practices (as described at the beginning of this section) from being implemented? Check all that apply. This question should be answered regardless of entity (e.g., state, county, or city) that imposes the requirement.

Response	Yes
Specific Water Requirements	
Standing water restrictions which may prevent the use of practices that impound stormwater.	21 (32%)
Water rights issues	17 (26%)
Restrictions related to groundwater contamination potential	31 (49%)
Restrictions related to sole source aquifer limitations	14 (22%)
Restrictions on tree/wetland protection requirements	23 (35%)
Depth to water table/groundwater	34 (55%)
Other	14 (23%)
Site Design/Infrastructure Practices	
Curb and Gutter requirements which may restrict roadside infiltrations practices	38 (58%)
Maximum/Minimum parking lot size requirements	7 (11%)
Maximum/Minimum roadway widths	45 (69%)
Requirements setting minimum/maximum cul-de-sac radius	6 (9%)
Restrictions on the width of rights of way	39 (62%)
Conflicts in obtaining private land (e.g., for use as a public right of way)	49 (77%)
Other[b]	11 (17%)
Building/Structure Requirements, Policies, or Guidelines	
Restrictions on setbacks/frontages (e.g., for metro stations or rest stop buildings)	15 (23%)
Restrictions related to plumbing codes (e.g., prohibitions on stormwater reuse for toilet flushing)	3 (5%)
Other[c]	9 (14%)
Vegetation Requirements, Policies or Guidelines	
Restriction on height of vegetation (e.g., wetland vegetation or grasses)	29 (45%)
Restriction related to tree placement (e.g., restricting the places where trees may be planted, such as near sidewalks, utility poles, along certain stretches of roads)	47 (72%)
Aesthetic requirements for plantings	17 (26%)
Other[d]	4 (8%)
Other Requirements	
Requirements that may restrict the use of pervious concrete, porous asphalt, modular block pavers, or other alternatives to conventional/impermeable paving materials	24 (37%)
Restrictions on stormwater reuse for irrigation (e.g., health code restrictions)	7 (11%)
Restrictions related to vector (e.g., mosquito) controls	22 (34%)
Restrictions related to concerns related to clear zones, site distance, geometry, etc.	55 (83%)
Concerns related to the structural integrity of roadway facilities	53 (88%)
Concerns related to maintenance access	48 (74%)
Concerns related to traffic handling	44 (69%)

Response	Yes
Concerns related to highway workers safety	45 (71%)
Requirements for mandatory treatment of discharges	12 (18%)
Other[e]	8 (12%)

a. Those who responded "yes" to "Other Specific Water Requirements" described the following: amount of available right of way - must be constructed outside the clear zone for safety requirements (1), contaminated properties and soil type (1), Drinking Water Supply Management Areas (1), frozen ground (2), impacts to other properties and waters in the area (1), Karst topography (3), local regulations enforced in the city area of impacts (1), long-term performance (1), primary focus is the safety of the traveling public (1), public concerns with mosquito issues (1), standing water in the linear environment can lead to a higher risk of death or endangerment to the motoring public (hydroplaning and drowning) (1), and none or not applicable (6).
b. Those who responded "yes" to "Other Site Design/Infrastructure Practices" described the following: capital cost (4); clear zone restrictions (1); cost of right-of-way (8); costs of urban land, property owner relocations, impacts to improved properties, neighborhood livability and sustainability of controls (1); lack of right-of-way (1); limitations of additional right-of-way (4); and none or N/A (4).
c. Those who responded "yes" to "Other Building/Structure Requirements, Policies, or Guidelines" described the following: restricted lot sizes (1) and none or N/A (12).
d. Those who responded "yes" to "Other Vegetation Requirements, Policies or Guidelines" described the following: increased routine vegetation maintenance requirements in neighborhoods, commercial areas, highly visible contexts (1); local regulations enforced in the city area of impacts prohibit stormwater facilities combined with required landscaping (1); relying on other agencies for long-term maintenance (1); and none or N/A (3).
e. Those who responded "yes" to "Other Requirements" described the following: attractive nuisance concerns (1); concerns related to ability to maintain structures (both personnel (training and hours) and equipment) (1); concerns related to permeable or porous pavements (durability, safety concerns associated with road slickness, stability, spill containment and high maintenance cost) (1); drinking water issues (1); in-stream restrictions for construction and maintenance eliminates our ability to maintain existing stormwater facilities that are considered to be US Waters or to develop new facilities in situations where ditches or other roadside features are considered US Waters (1); possible impacts to cultural, historical, archeological resource (1); vector-related concerns have been a concern of the public on transportation projects (1), and none or N/A (2).

Question A-61. Do you have any of the following maintenance concerns that may prevent stormwater retention practices (as described at the beginning of this section) from being implemented in your MS4?

Response	Yes
Safety of highway workers	40 (62%)
Safety related to clear zones, site distance, emergency access, geometry, etc.	53 (83%)
Disease vector (e.g., mosquitoes)	39 (62%)
Space availability	57 (89%)
Ease of access	49 (75%)
Endangered/threatened species (e.g., concerns related to inadvertently impacting endangered/threatened species and/or their habitat)	35 (54%)
Other	18 (29%)
None	3 (5%)

Question A-62. Has stormwater infiltration ever been prohibited on your sites due to concerns related to groundwater contamination, drinking water reservoirs, and/or sole source aquifers?

Response	Number of Respondents
Yes	21 (32%)
No	24 (40%)
N/A	1 (2%)
Unknown	17 (26%)

Question A-63. Does your DOT's stormwater discharge to a state-defined source water protection area for public water supplies?

Response	Number of Respondents
Discharges from your MS4	
Yes	34 (54%)
No	13 (22%)
Unknown	16 (25%)
Discharges from the total area under your control	
Yes	27 (42%)
No	16 (26%)
Unknown	17 (26%)
No answer	3 (6%)

Question A-64. Are any of the following implemented in your MS4 service area? (Check all that apply. The list includes self-imposed requirements, DOT MS4 permit requirements, and externally imposed requirements (local/county requirements).

Response	Yes
Requirements limiting the amount of land that can be disturbed at any given time (e.g. only 20 percent of the land can be disturbed for any project at any given time)	34 (52%)
Natural area protection	43 (66%)
Stream restoration/remediation program	30 (46%)
Buffer/riparian corridor requirements	33 (51%)
Incentives for green infrastructure/low impact development practices	8 (12%)
Restrictions on the amount of impervious surfaces (e.g., caps on the amount of impervious surfaces)	8 (12%)
Other	6 (9%)
None	9 (15%)
N/A	2 (3%)

Question A-65. Do you have a program or plan for future capital improvements to address lack of capacity in your stormwater conveyance system/MS4?

Response	Number of Respondents
Yes	12 (18%)
No	46 (74%)
N/A	5 (8%)

Question A-66. Have you performed any of the following types of monitoring? (This question includes laboratory analyses, field analyses, and visual surveys that the DOTs performed themselves or in coordination with other entities. Check all that apply.)

Response	Number of Respondents
Stormwater outfall monitoring	44 (69%)
Stormwater monitoring of specific stormwater controls	35 (55%)
Edge of pavement monitoring or other characterization of roadway stormwater discharges	16 (26%)
In-stream monitoring for water quality parameters	18 (28%)

Response	Number of Respondents
In-stream monitoring for biological parameters	12 (18%)
In-stream monitoring for geomorphology or physical habitat	10 (15%)

Question A-67. Do you conduct monitoring for pollutant levels (e.g., pH, metals, nutrients, suspended solids, etc.) or flow-related parameters (e.g., flow rate, volume, etc.) at the following locations?

Type of Monitoring	Outfalls	Stormwater Controls	Edge of Pavement
Pollutant levels	25 (38%)	11 (17%)	8 (12%)
Flow-related parameters	17 (26%)	9 (14%)	5 (8%)
Toxicity	12 (18%)	6 (9%)	4 (6%)
Sediment	18 (28%)	13 (20%)	7 (11%)
Other	16 (25%)		
Not applicable, no monitoring program	27 (42%)		

Question A-68. Do you have data that you have collected or that have been collected on your behalf indicating any chemical, biological, and/or physical changes in the receiving waters to which you discharge stormwater that you can attribute to your stormwater program (e.g., we saw a reduction in total nitrogen and an increase in sensitive stream macroinvertebrates)?

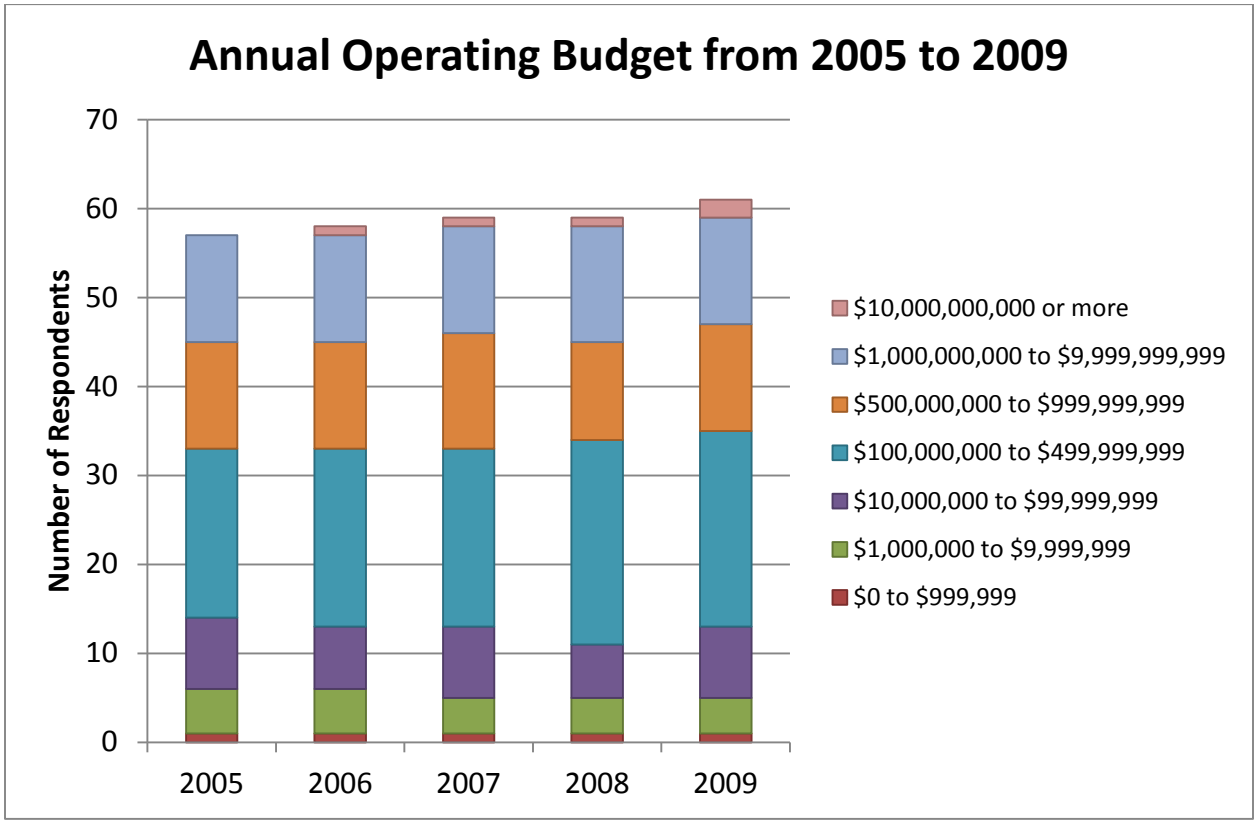
Response	Number of Respondents
Yes, describe:	5 (8%)
No	51 (80%)
Unknown	7 (11%)
Not applicable	1 (2%)

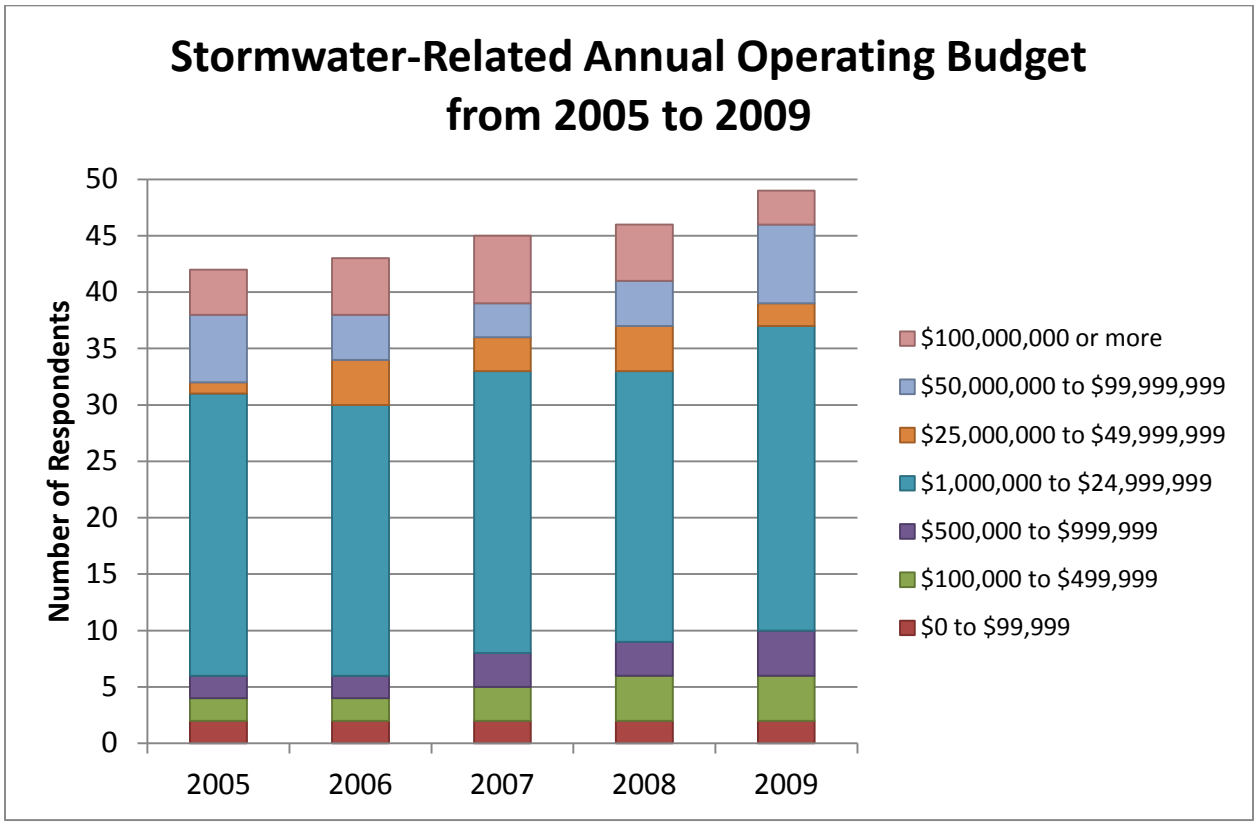
Section B – Financial Information

Question B-1. Indicate your agency/department's total operating budget and stormwater related annual operating budget.

Statistic	2005	2006	2007	2008	2009
Total Operating Budget					
N	57	58	59	59	61
Minimum	$229,000	$317,000	$233,000	$302,000	$315,000
Average	$835,976,332	$873,484,776	$877,864,792	$942,028,085	$953,810,295
Median	$353,970,000	$381,362,785	$387,973,429	$368,804,208	$394,644,025
Maximum	$9,700,000,000	$12,200,000,000	$10,300,000,000	$13,900,000,000	$13,800,000,000
St. Dev.	$1,718,817,055	$1,840,935,643	$1,678,930,712	$2,071,158,157	$2,221,165,803
Stormwater Related Annual Operating Budget					
N	42	43	45	46	49
Minimum	$25,000	$14,000	$800	$800	$800
Average	$32,168,427	$37,543,978	$39,102,678	$34,355,079	$31,029,129
Median	$6,711,237	$6,402,326	$8,480,695	$8,566,926	$7,788,621
Maximum	$268,331,180	$231,908,073	$447,523,669	$309,756,160	$293,814,931

Statistic	2005	2006	2007	2008	2009
St. Dev.	$55,141,227	$63,686,963	$78,779,346	$61,382,787	$54,032,435





Question B-2. Select the month that begins your fiscal year.

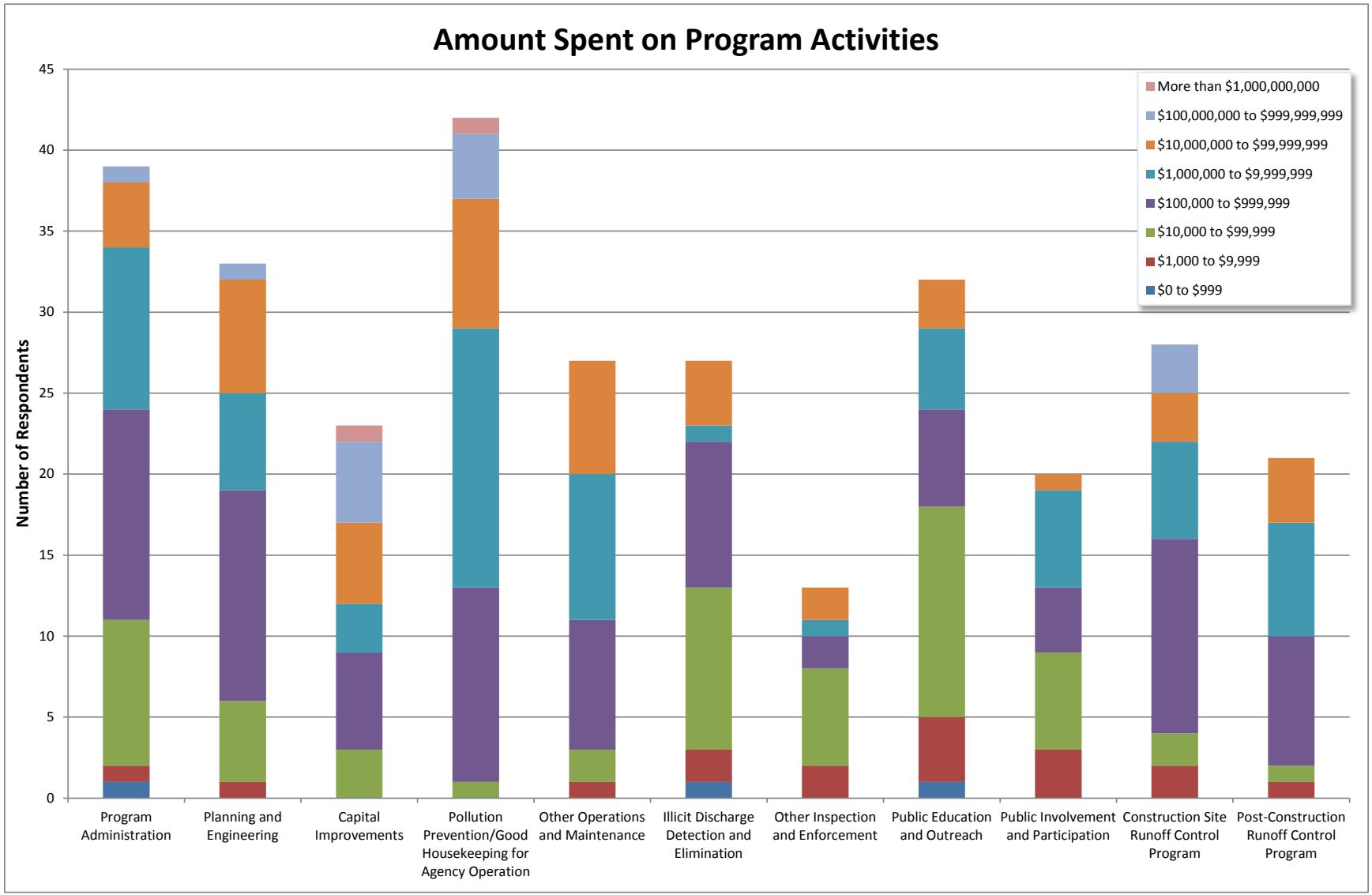
Month	Number of Respondents
January	1
February	0
March	0
April	1
May	0
June	0
July	48
August	1
September	5
October	5
November	0
December	0

Note: two agencies did not answer the question

Question B-3. For the five year period from 2005 to 2009, on average, what percent of the stormwater budget did you approximately spend on the following activities? Total must equal 100%.

Activity	Count	Minimum	Average	Median	Maximum	Standard Deviation
Program administration	39	$800	$6,906,856	$355,172	$120,000,000	$21,407,007
Planning and engineering	33	$4,100	$13,628,689	$707,200	$180,000,000	$34,722,947

Activity	Count	Minimum	Average	Median	Maximum	Standard Deviation
Capital improvements	23	$25,000	$120,927,706	$3,663,000	$1,502,268,051	$313,454,188
Pollution prevention/ good housekeeping for agency operation	42	$90,000	$78,491,319	$3,699,500	$2,119,532,700	$330,654,181
Other operations and maintenance	27	$4,752	$10,259,776	$1,946,225	$89,193,729	$19,669,555
Illicit discharge detection and elimination	27	$320	$4,049,077	$105,200	$39,464,403	$10,283,047
Other inspection and enforcement	13	$6,000	$2,538,883	$79,536	$13,671,780	$4,723,663
Public education and outreach	32	$477	$2,704,794	$60,000	$36,000,000	$7,032,341
Public involvement and participation	20	$3,219	$1,669,495	$386,764	$11,382,819	$2,860,036
Construction site runoff control program	28	$2,546	$22,787,264	$600,000	$281,249,133	$59,436,628
Post-construction runoff control program	21	$6,000	$7,606,335	$1,039,092	$59,196,604	$14,887,124


Amount Spent on Program Activities
Number of Respondents
0
5
10
15
20
25
30
35
40
45
More than $1,000,000,000
$100,000,000 to $999,999,999
$10,000,000 to $99,999,999
$1,000,000 to $9,999,999
$100,000 to $999,999
$10,000 to $99,999
$1,000 to $9,999
$0 to $999
Program Administration
Planning and Engineering
Capital Improvements
Pollution Prevention/Good Housekeeping for Agency Operation
Other Operations and Maintenance
Illicit Discharge Detection and Elimination
Other Inspection and Enforcement
Public Education and Outreach
Public Involvement and Participation
Construction Site Runoff Control Program
Post-Construction Runoff Control Program

Funding and Employment Questions

Question B-4. What percentage of your stormwater program revenue comes from the following sources?

The following table provides a further breakdown of revenue sources based on the percentage of total revenue attributable to each source. For example, 15 TS4s receive 75 to 100 percent of their total revenue from motor fuel taxes, whereas for six MS4s, 50 to 75 percent of revenue is from motor fuel taxes.

	Percent of Stormwater Revenue			
Revenue Source	**>0-25%**	**26-50%**	**51-75%**	**76-100%**
Motor Fuels Taxes	7	2	5	6
Toll Road Revenue	19	0	1	0
FHWA Transportation Enhancement Activity	13	4	6	2
State Transportation Funds	10	11	3	0
State General Fund	17	2	1	1
Grants (EPA 319 Funds, etc.)	21	0	0	0
Other	14	6	0	0

Question B-5. Which stormwater program revenue sources are dedicated and which are discretionary sources?

Revenue Source	**Dedicated**	**Discretionary**	**Not a Source**
Motor Fuels Taxes	15 (24%)	20 (32%)	19 (30%)
Toll Road Revenue	1 (2%)	2 (3%)	46 (73%)
FHWA Transportation Enhancement Activity	6 (10%)	14 (22%)	33 (52%)
State Transportation Funds	17 (27%)	20 (32%)	20 (32%)
State General Fund	1 (2%)	9 (14%)	41 (65%)
Grants (EPA 319 Funds, etc.)	1 (2%)	3 (5%)	46 (73%)

Question B-6. What is the estimated number of full time equivalents (FTEs) that your organization has devoted to stormwater related activities over the past five years?[a]

Statistic	**2005**	**2006**	**2007**	**2008**	**2009**
Stormwater FTEs					
N	39	40	41	41	42
Minimum	0	0	0	0	0
Average	1,720	1,738	1,731	1,743	1,693
Median	2	3	3	3	3
Maximum	50,000	50,000	50,000	50,000	50,000
St. Dev.	8,106	8,041	7,940	7,939	7,847
Non-Stormwater FTEs					
N	43	43	45	46	49
Minimum	0	0	0	0	0
Average	10,852	10,631	10,249	10,182	9,532

Statistic	2005	2006	2007	2008	2009
Median	24	25	25	25	23
Maximum	300,000	300,000	300,000	300,000	300,000
St. Dev.	49,082	48,525	47,673	47,488	46,051

a. Some TS4s probably reported hours instead of FTEs. So the average and maximum values above are questionable. It's difficult to determine by looking at the data which are reported as hours.

Mitigation Questions

Question B-7. Is there an off-site mitigation program available to you for mitigating the impacts of changes to site hydrology?

Response	Number of Respondents
Yes	10 (15%)
No	53 (85%)

Question B-8. Do you have the option available for payment-in-lieu of mitigation?

Response	Number of Respondents
Yes	10 (15%)
No	53 (85%)

Question B-9. Do you have the authority to require adjacent properties discharging to your system to manage or treat their stormwater?

Response	Number of Respondents
Yes	30 (47%)
No	33 (53%)

Stormwater Fee Questions

Question B-10. Do you have the authority to charge and/or increase stormwater fees?

Response	Number of Respondents
Yes	0
No	63 (100%)

Question B-11. Are you subject to stormwater fees in jurisdictions that you operate in?

Response	Number of Respondents
Yes	21 (32%)
No	42 (68%)

Capital Improvement Project Questions

Question B-12. Did you initiate stormwater capital projects to address inadequate stormwater system capacity anytime in the period of FY 2005 through FY 2009?

Response	Number of Respondents
Yes	17 (26%)
No	44 (71%)
No answer	2 (3%)

Question B-13. What was the approximate annual cost and percentage of your total stormwater system addressed by the capacity expansion?

Response or Statistic	2005	2006	2007	2008	2009
Dollars					
"N/A"	33	33	32	33	31
"Unknown"	16	15	15	14	14
N	5	6	6	7	8
Minimum	$130,000	$136,600	$134,500	$105,521	$11,549
Average	$74,208,361	$54,237,797	$89,903,985	$54,695,737	$50,558,619
Median	$8,508,655	$3,894,036	$4,344,558	$1,418,774	$7,434,601
Maximum	$268,339,180	$231,916,073	$447,531,669	$309,764,160	$293,822,931
St. Dev.	$115,372,590	$93,224,230	$178,078,987	$114,918,190	$100,701,463
Percent of Service Area					
"N/A"	23	23	23	23	23
"Unknown"	19	18	17	18	17
N	1	2	2	2	4
Minimum	0%	0%	0%	0%	0%
Average	0%	1%	3%	0%	2%
Median	0%	1%	3%	0%	1%
Maximum	0%	1%	5%	0%	5%
St. Dev.	—	1%	4%	0%	2%

Question B-14. Did your jurisdiction initiate stormwater retrofit projects to address water quality anytime in the period of FY 2005 through FY 2009?

Response	Number of Respondents
Yes	15 (25%)
Yes, only on public property	8 (14%)
No	38 (58%)

Question B-15. What was the approximate annual stormwater retrofit cost and number of projects completed?

Response or Statistic	2005	2006	2007	2008	2009
Dollars					
"N/A"	8	9	8	8	8
"Unknown"	3	3	3	2	4
N	11	8	9	13	12
Minimum	$96,000	$100,000	$24,035	$20,000	$24,000
Average	$1,170,562	$2,037,046	$1,680,150	$2,072,226	$3,134,123
Median	$473,438	$575,719	$727,000	$473,438	$513,719

Response or Statistic	2005	2006	2007	2008	2009
Maximum	$5,685,000	$7,678,296	$5,214,000	$15,445,000	$28,848,000
St. Dev.	$1,741,253	$2,960,334	$1,954,967	$4,224,213	$8,163,941
Number of Projects					
"N/A"	6	7	6	7	6
"Unknown"	3	3	3	3	5
N	10	7	8	10	11
Minimum	1	2	1	1	1
Average	3	4	3	3	3
Median	1	2	1	2	2
Maximum	14	14	14	14	14
St. Dev.	4	4	5	4	4

Question B-16. Did you initiate projects for stream restoration associated with correcting or mitigating impairment from stormwater discharges anytime in the period of FY 2005 through FY 2009?

Response	Number of Respondents
Yes	12 (18%)
No	51 (82%)

Question B-17. What was the approximate annual cost and miles of stream restored that was associated with stormwater discharges?

Response or Statistic	2005	2006	2007	2008	2009
Dollars					
"N/A"	10	9	9	9	9
"Unknown"	6	6	6	6	6
N	5	4	5	5	6
Minimum	$20,000	$20,000	$20,000	$20,000	$20,000
Average	$81,368	$267,919	$376,362	$364,086	$617,938
Median	$50,000	$86,763	$100,290	$200,000	$249,769
Maximum	$190,883	$878,149	$1,212,957	$1,314,276	$2,679,327
St. Dev.	$67,405	$408,265	$496,158	$540,167	$1,024,233
Stream Miles[a]					
"N/A"	10	9	9	9	9
"Unknown"	5	4	5	4	5
N	2	2	2	3	4
Minimum	0	0	0	0	0
Average	5	8	10	11	8
Median	5	8	10	2	1
Maximum	10	15	20	30	30
St. Dev.	7	11	14	17	15

a. One of the respondents reported stream length in feet, so this value was converted to miles.

Question B-18. What was the purpose or goal of stream restoration?

Response	Number of Respondents

Response	Number of Respondents
Erosion control to reduce sedimentation of downstream reservoir	3 (5%)
Stream bank stabilization to reduce scouring of infrastructure	7 (11%)
Stream bank stabilization to reduce property loss due to erosion	6 (9%)
Flood control	2 (3%)
Habitat protection, fisheries concerns	4 (6%)
Aesthetics	2 (3%)
Other	5 (8%)

Question B-19. Indicate the type of stabilization measures that were done.

Response	Number of Respondents
Vegetative stabilization	1 (2%)
Non-vegetative stabilization such as concreting, installing riprap, etc.	2 (3%)
Combination of vegetative and non-vegetative measure	17 (26%)
No answer	45 (69%)